

## Selkirk College - 2011 Carbon Neutral Action Report

### Executive Summary

Conservation of the natural environment and responsible use of natural resources are a core organizational value at Selkirk College. We are committed to implementing practices that promote a healthy natural environment: in our teaching activities, our administration, our facilities and operations, our funding allocations and our applied research priorities. We are committed to reducing our ecological footprint and creating a culture of sustainability through our educational efforts.

Selkirk College will be known as a green college. As a key value we place on ourselves as an institution and as good stewards of the environment, we continue to look for new and innovative ways to make these values into realities.

### Emissions Reduction Activities

To further compliment the recycling programs at each campus, the college has implemented on-site “co-mingle recycling bins” through WasteManagement which removes the need to separate and package recyclables into different bags, as well as the daily transportation of items to the local depot. The bin allows for monthly collection of recyclables. In 2011, the College increased the number of co-mingle bins from one to four.

The Castlegar campus Composting Program initiated in 2010 was expanded in 2011 to offer “Compost From Home”, which allows members of the College community to drop-off their home compost collections once a week. An additional eight compost bins were purchased for daily collection and addition to the Earth Tub, and a more aggressive collection schedule devised, and recycled paper towel was collected and utilized as compost bulking agent for the earth tub. As a result of the compost program, approximately 50-60 pounds a day of compostable materials were diverted from landfill in 2011.

In our effort to reduce fuel combustion, Selkirk College encourages staff to choose telecommuting or carpooling options for meetings outside of their home site. The college has reduced the overall travel budget by 30%, and has installed advanced software on employee PC's to allow for improved virtual connectivity. Skype interviews have been adopted by Human Resources and hiring managers for out-of-town incumbents wherever appropriate.

In 2010, an internal audit of personal desktop printers was conducted. In 2011, IT Services centralized print and copy services through shared multifunctional devices placed strategically throughout the campuses and began the removal of individual convenience printers. Employee PCs were upgraded with Adobe Reader to encourage print-to-file options vs. hardcopy prints. 100% of all network (shared) printers have been

programmed to double-sided print, and have been programmed with "print and hold" settings to help eliminate unclaimed print jobs.

Additional sustainability contributions through revised facilities and maintenance operations included the introduction of green cleaning products in the new Tenth Street Residence building. Plans for 2012 include a complete review of all custodial cleaning products used across all campuses and replacement of standard products with Green product wherever possible. In 2011, two paper towel dispensers were replaced with electric hand dryers, with an additional six planned for 2012. Standard water fountains were retrofitted to provide water-bottle filling stations at two Selkirk campuses to provide a responsible alternative to purchased water in disposable bottles.

**Plans to Continue Reducing Greenhouse Gas Emissions 2012 – 2014**

Selkirk College is committed to the continued reduction of green house gas emissions. Future plans for reduction include an exterior lighting review for significant power reduction outside of business hours, and completion of at least one emission reduction capital project in 2012. Environmental sustainability is a trait of the Selkirk culture and community it serves. Selkirk will continue to be a leader in reducing green house gases within the Kootenay Boundary area.

**2011 Greenhouse Gas Emissions**

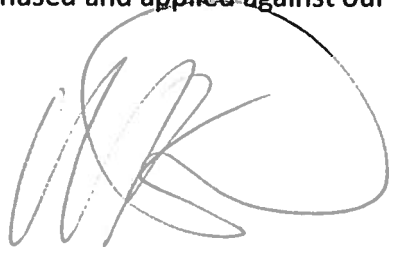
The following is a summary of 2011 greenhouse gas emissions from Selkirk College:

Mobile Fuel Consumption	51.34 tonnes CO2e
Stationary Fuel Combustion + Electricity (Buildings)	1504.52 " "
Supplies (Paper)	73.14 " "
<b>TOTAL EMISSIONS, CALENDAR YEAR 2011</b>	<b>1631 tonnes CO2e</b>
Carbon Neutral or Offset Exemption	2 tonnes Co2e
Total for Offsets	1629 tonnes Co2e

**Offsets Applied to Become Carbon Neutral in 2011**

Total emissions offset for Selkirk College in 2011 to become carbon neutral is 1629 tonnes CO2e.

Following the public release of Selkirk College's 2010 Carbon Neutral Action Report, it was determined that the total emissions for the 2010 calendar year were under reported by 49 tonnes CO2e and offsets required to become carbon neutral were under reported by this amount. The difference in offsets required have been purchased and applied against our 2010 emissions.



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## Actions Towards Carbon Neutrality

The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*.

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
<b>Mobile Fuel Combustion (Fleet and other mobile equipment)</b>							
<b>Vehicle fuel efficiency</b>							
Replace vehicles with more fuel-efficient models	In Development	20	% of vehicles are fuel- efficient models		Plan to replace at least 1 maintenance vehicle with a fully electric vehicle as capital budget allows	2012	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	In Development	0	% of vehicles down-sized since start year indicated		Plan to replace full size maintenance pick-up with smaller, electric vehicle during next purchase cycle	2012	No End Date (Continuous)
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	All vehicles receive required maintenance on a regular mileage or time basis including tune-ups to maintain fuel efficiency.	Continuation of regular completion of maintenance to ensure fuel efficiency.	2008	No End Date (Continuous)
<b>Behaviour change program</b>							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	80	% of current drivers are trained	Post reminders on vehicle dashboards	Ongoing promotion	2009	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Ongoing Promotion	Travel budget reduced by 30%	2006	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Support of public transit system to maintain and expand public bus service	Provision of secured bicycle storage for renovated student Residence building	2011	No End Date (Continuous)
<b>Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)</b>							
<b>Owned buildings</b>							
Establish energy performance baseline for owned buildings	Ongoing/In Progress	90	% of owned buildings have an established energy performance baseline	Completed an energy audit of the Silverking Campus	Complete a project proposal to replace the heating and cooling system at the Castlegar campus with a hybrid geothermal system	2011	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress			Pursued LEED Gold certification for renovated Tenth Street Residences	Complete certification process	2010	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	In Development				Obtain funding to upgrade heating and cooling system at Castlegar campus to reduce gas and electricity use.	2012	No End Date (Continuous)
<b>Retrofitting owned buildings</b>							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	In Development				Complete project proposal to upgrade the Castlegar campus heating/cooling system with a hybrid geothermal system	2011	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	75	% of retrofits since start year indicated had lighting systems upgrades	Replace existing lighting with higher efficiency fluorescent or LED	Replace existing lighting as required with LED or energy efficient fluorescent	2009	No End Date (Continuous)
<b>IT power management</b>							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress			Continuation of installation of power management software	Ongoing	2007	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Implement server virtualization	Ongoing/In Progress			Ongoing	Ongoing	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress			Ongoing	Ongoing	2010	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress			Removal of convenience printers and faxes to shared multifunctional devices	Completion of removal of convenience printers and fax machines	2011	2012
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress			Completed as fax machines were replaced	Ongoing for 2012 as fax machines are replaced	2007	2013
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress			Replacement computers are ENERGY STAR rated	Continue to replace computers with ENERGY STAR models	2007	No End Date (Continuous)
<b>Appliances and electronic devices</b>							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	80	% of fridges are ENERGY STAR rated	All refrigerators purchased for Tenth Street Residences are ENERGY STAR	Continue to replace refrigerators with ENERGY STAR models as required	2011	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			All other appliances purchased for Tenth Street Residences are ENERGY STAR	Continue to ensure future appliance purchases are ENERGY STAR	2011	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Ongoing/In Progress			All desk lamps at Tenth Street Residences use CFL bulbs	Continue to use CFL or LED lighting for future lighting projects and as regular replacements	2010	No End Date (Continuous)
<b>Behaviour change program</b>							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Communicated in employee intranet site	Continue with regular communications	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Communicated in employee intranet site	Continue with regular communications (ie. posters)	2009	No End Date (Continuous)
<b>Supplies (Paper)</b>							
<b>Paper Type</b>							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	85	% of total paper purchased contains 30% recycled content	Increased quantity of recycled paper purchases	Continue to ensure at least 30% recycle content in paper purchases	2009	No End Date (Continuous)
<b>Printer/document settings</b>							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	100	% of network printers or photocopiers are set to automatic double-sided	100% of all shared printers switched to double sided	Move to default "Print to PDF" and "Copy to Email" settings	2011	2012
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress	100	% of network printers have 'print and hold' settings applied	100% of networked (shared) printers completed	Elimination of unshared printers	2011	2012
Reduce default margin size in standard document templates (e.g., letters, briefing notes, forms, etc.)	In Development				Education plan and training has begun for staff while default templates have been adjusted	2012	2013
<b>Electronic media in place of paper</b>							

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development				A pilot of both Alfresco as a document management system as well as Base Camp for on-line collaboration are in development	2012	2013
Use electronic document library for filing common documents	Ongoing/In Progress			80% of staff utilize Moodle as a document sharing platform for collaboration	Upgrade to Moodle 2.0 with an emphasis on bringing the "other 20%" of staff into the system	2009	2013
Post materials online that were previously printed	Ongoing/In Progress			Development of employee intranet site and communication is now available there.	Launch employee intranet site. Develop student based intranet site and launch in 2012. Continue development of the employee intranet as a single point of information	2011	2012
<b>Behaviour change program</b>							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development				Training to be provided as tools listed above are deployed	2012	2013
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Committee documentation is uploaded to Moodle for on-line use. PaperCut software reminds staff of the costs of print each time a document is printed	Deployment of tablets as well as wireless technologies continues with an emphasis on "live documents, not dead trees" campaign	2011	2013
Encourage re-use of scrap paper	Completed in 2011			Scrap paper is provided in administrative areas for re-use as scratch paper		2008	2011

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## Actions to Reduce Provincial Emissions and Improve Sustainability

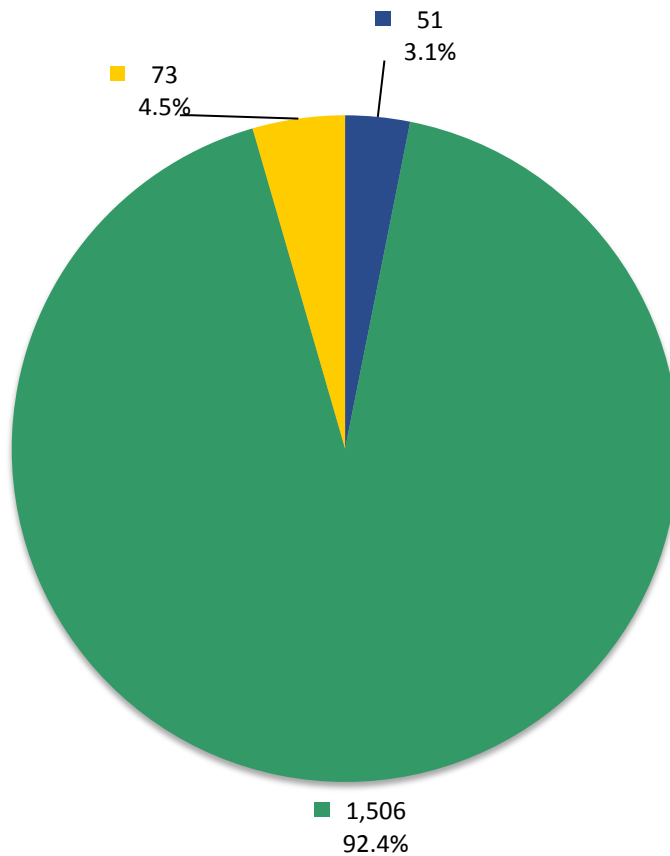
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*. Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
<b>Business Travel</b>						
<b>Virtual meeting technology</b>						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress		Small pilot projects around web conferencing developed and tested	Implement a hosted solution for virtual meetings in 2012 with a Phase 1 emphasis on internal communications between campus sites. A further investigation into "distance learning" is on-going with a pilot project scheduled for the fall of 2012	2011	2013
Make desktop web-cameras available to staff	Ongoing/In Progress		Cameras were brought in to support above pilot projects	Purchase enough cameras and headsets to support 60% of Administrative and support staff and 20% of teaching staff (school chairs, Deans and key instructors)	2011	2014
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress		Three meeting rooms were outfitted with systems to create video conferencing environments	Provide designated meeting rooms and key lecture rooms on all campuses for video conferencing refits	2011	2014
<b>Behaviour change program</b>						
Train staff in web-conferencing	Ongoing/In Progress		Training was completed for those staff involved in pilot projects	Continue to train additional staff as this technology is deployed	2011	2014
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress		All staff have access to trained IT Services staff to support the use of these technologies	Continue to make IT staff available to support deployed technologies	2009	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	In Development			Travel budget has been reduced by 30% requiring virtual attendance at events	2012	2013
Encourage carpooling to meetings	In Development			Carpooling will be required with reduced travel budget	2012	2013
<b>Education, Awareness, and Engagement</b>						
<b>Team-building</b>						
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress		Installation of power bars for all systems to simplify "power down" program.	Implementation of JuicePress to control all lab and classroom computer system power management	2009	2014
<b>Staff Professional Development</b>						
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress		Green development program offered to employees on college "Discovery day"	Continue to offer "green" training and development to employees	2010	No End Date (Continuous)
<b>Staff awareness/education</b>						
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		Professional development courses offered to staff annually on conservation	Ongoing	2008	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress		Green tips included in launched employee intranet site	Ongoing	2008	No End Date (Continuous)
<b>Other Sustainability Actions</b>						
<b>Water conservation</b>						

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Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress		All washroom fixtures installed in Tenth Street residences are water conserving	Continue to replace required washroom fixtures with low flow units	2011	No End Date (Continuous)
Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features	Ongoing/In Progress		New landscaping projects to be designed with minimal water use.	Complete landscape plan at tenth Street Residences utilizing minimal water usage	2010	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	In Development			Landscape plan for Tenth Street Residences to include a stormwater management plan	2012	2012
<b>Waste reduction/diversion</b>						
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress		"Co-mingling" bins for accepting a greater variety of recyclable materials were installed at the Castlegar campus. A program to allow compostable materials from student and staff homes to be brought into the College conposter was established.	Continue with program to allow home compost to be brought into College's composter	2009	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress		Collection system for annual disposal of hazardous waste established.	Continue with annual College-wide disposal of hazardous waste	2009	No End Date (Continuous)
<b>Procurement (non-paper supplies)</b>						
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Ongoing/In Progress		Incorporated into mandate of Capital Planning Committee	To be reviewed with all new purchases	2008	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		Review and trials of green cleaning products for Residence building completed	Incorporate all green cleaning products for this facility and extend into other areas of the campus	2011	2013
<b>Building construction, renovation, and leasing</b>						
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress		Wood waste is offered to staff and students for re-use or firewood	Education of maintenance crews to ensure excess materials for jobs are not purchased	2009	No End Date (Continuous)
<b>Indoor air quality</b>						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		Scent free policy in place and new posters developed and installed throughout campuses. Education of staff on potential hazards of scents to some students completed	Ongoing promotion of scent free policy	2008	No End Date (Continuous)

**Selkirk College  
Greenhouse Gas Emissions by Source  
for the 2011 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 1,631**

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

**Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 11:23 AM)**

Total offsets required: **1,629**. Total offset investment: **\$40,725**. Emissions which do not require offsets: **2** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

\*\* Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.